AMENDMENTS TO THE CLAIMS

Please amend applicants' claims, without prejudice, to read as follows:

1 (Currently Amended). A method of producing color compensation transforms comprising the steps of:

~~generating a plurality of color reference patches;~~

using a calibrated scanner to ~~scanning~~ scan a plurality of color reference patches to produce a corresponding plurality of scanned color space values, wherein ~~the scanning is performed with a calibrated scanner~~ the color reference patches of said plurality thereof exhibit respective material compositions sufficiently different, one from the other, as to ordinarily prevent a typical scanner, calibrated to a one of such material compositions, from producing scanned color space values of as high a degree of accuracy with respect to scannable objects exhibiting any other of such material compositions than said one of such material compositions;

~~measuring said patches with an optical measuring device to produce measured color space values;~~ and

combining said plurality of scanned color space values with a plurality of measured color space values to ~~creating~~ create a compensation table ~~from said scanned color space values and said measured color space values~~, the measured color space values of said plurality thereof being a result of the color reference patches of the plurality thereof having been measured with an optical measuring device;

wherein said compensation table is selectively useable as part of said compensation transforms to enable an otherwise typical scanner to produce scanned color space values of substantially as high a degree of accuracy with respect to a scannable object exhibiting any one of such material compositions as with respect to a scannable object exhibiting any other one of such material compositions.

2 (Previously Presented). A method according to claim 1, wherein said compensation transforms for CMYK inks are processed for different levels of K using the formula $y = af_0(x) + (1-a)f_1(x)$, wherein y is the compensated output, x is the uncompensated output,

$f_0(x)$ is a transform for a first K cube, $f_1(x)$ is a transform for a second K cube, and a is a scaling factor.

3 (Original). A method according to claim 1, further comprising the step of interpolating between different levels of K.

4 (Previously Presented). A method according to claim 1, wherein said color reference patches represent different combinations of inks.

5 (Original). A method according to claim 1, further comprising the step of transforming a color value of a color patch based on the original ink values of said color patch.

6 (Original). A method according to claim 1, wherein said optical measuring device is a spectrophotometer.

7 (Original). A method according to claim 1, wherein said compensation transforms are a set of look up tables that map scanned uncompensated CIEL*a*b values to compensated CIEL*a*b values.

8 (Original). A method according to claim 1, wherein said compensation transforms are a set of look up tables that map scanned uncompensated CIEL*a*b values to compensated CIEL*a*b values for different combinations of ink values.

9 (Currently Amended). A method according to claim 1, further comprising the steps of mapping scanned CIEL*a*b values to optically measured CIEL*a*b values by using a CIEL*a*b to CMY transform ~~for~~ with respect to said ~~scanning~~ scanned color space values of said plurality thereof and a CMY to CIEL*a*b transform ~~for~~ with respect to said ~~optical measuring device~~ measured color space values of said plurality thereof.

10. (Original). A method according to claim 1, wherein said compensation transforms are a set of look up tables constructed out of gamut CIEL*a*b values using the least squares algorithm with CIEL*a*b values in the tables that are in gamut.

11. (New). A method according to claim 1, further comprising generating the color reference patches of said plurality thereof.

12. (New). A method according to claim 1, further comprising using an optical measuring device to measure the color reference patches of said plurality thereof to produce the measured color space values of said plurality thereof.

13 (New). A method according to claim 1, wherein the color reference patches of said plurality thereof exhibit respective material compositions sufficiently different, one from the other, with respect to at least one selected from a group comprising respective inks, respective combinations of inks, respective paper, respective combinations of ink and paper, and combinations thereof, as to ordinarily prevent a typical scanner, calibrated to a one of such material compositions, from producing scanned color space values of as high a degree of accuracy with respect to scannable objects exhibiting any other of such material compositions than said one of such material compositions.

14 (New). A method according to claim 1, wherein the color reference patches of said plurality thereof include at least two color reference patches exhibiting substantially the same color, and yet exhibit respective material compositions sufficiently different, one from the other, with respect to at least one selected from a group comprising respective inks, respective combinations of inks, and combinations thereof, as to ordinarily prevent a typical scanner, calibrated to a one of such material compositions of said at least two color reference patches, from producing scanned color space values of as high a degree of accuracy with respect to scannable objects exhibiting the other of such material compositions of said at least two color reference patches than with respect to scannable objects exhibiting said one of such material compositions of said at least two color reference patches.

15 (New). A color reference patch kit for use in producing color transformation transforms, comprising:

a plurality of color reference patches, wherein the color reference patches of the plurality thereof exhibit respective material compositions sufficiently different, one from the other, as to ordinarily prevent a typical scanner, calibrated to a one of such material compositions, from producing scanned color space values of as high a degree of accuracy with respect to scannable objects exhibiting any other of such material compositions than said one of such material compositions.

16 (New). A color reference patch kit in accordance with claim 15, wherein the color reference patches of the plurality thereof exhibit respective material compositions sufficiently different, one from the other, with respect to at least one selected from a group comprising respective inks, respective combinations of inks, respective paper, respective combinations of ink and paper, and combinations thereof, as to ordinarily prevent a typical scanner, calibrated to a one of such material compositions, from producing scanned color space values of as high a degree of accuracy with respect to scannable objects exhibiting any other of such material compositions than said one of such material compositions.

17 (New). A method according to claim 15, wherein the color reference patches of said plurality thereof include at least two color reference patches exhibiting substantially the same color, and yet exhibit respective material compositions sufficiently different, one from the other, with respect to at least one selected from a group comprising respective inks, respective combinations of inks, and combinations thereof, as to ordinarily prevent a typical scanner, calibrated to a one of such material compositions of said at least two color reference patches, from producing scanned color space values of as high a degree of accuracy with respect to scannable objects exhibiting the other of such material compositions of at least two color reference patches, as with respect to scannable objects exhibiting said one of such material compositions of said at least two color reference patches.

18 (New). A method of producing compensation transforms comprising the steps of:

generating a plurality of color reference patches;

scanning said patches to produce color space values, wherein the scanning is performed with a calibrated scanner;

measuring said patches with an optical measuring device to produce measured color space values; and

creating a compensation table from said scanned color space values and said measured color space values;

wherein said compensation transforms for CMYK inks are processed for different levels of K using the formula $y = af_0(x) + (1-a)f_1(x)$, wherein y is the compensated output,

x is the uncompensated output, $f_0(x)$ is a transform for a first K cube, $f_1(x)$ is a transform for a second K cube, and *a* is a scaling factor.